

CLAIMS

1. Brush holder plate (18) with cartridges (20) and with brushes (22) guided in the cartridges (20), wherein the guidance of the brushes (22) takes place under spring loading in the radial direction towards a central aperture (24) in the brush holder plate (18), **characterised in** that the cartridges (20) are disposed such that they can be displaced on the brush holder plate (18) from a radially outer preassembly position into a radially inner final assembly position.

2. Brush holder plate (18) according to Claim 1, characterised in that the cartridges (20) and/or the brushes (22) do not project into the aperture (24), or only to a slight degree, in the preassembly position.

3. Brush holder plate (18) according to Claim 1 or 2, characterised in that holding means (30) hold the brushes (22) in the cartridges (20) in a radially outer position in the preassembly position.

4. Brush holder plate (18) according to Claim 3, characterised in that the brushes (22) do not project out of the cartridges (20), or only to a slight degree, in the preassembly position.

5. Brush holder plate (18) according to Claim 3 or 4, characterised in that the holding means (30) free the brushes (22) in the final assembly position or shortly before the latter is reached.

6. Brush holder plate (18) according to Claim 3, 4 or 5, characterised in that the holding means encompass spring tongues (30) which are connected to the cartridges and the free ends (36) of which act on the brushes (22, 38) in the preassembly position.

7. Brush holder plate (18) according to Claim 6, characterised in that the spring tongues (30) lie on the side of the brush holder plate (18) which is remote from the respective brush (22), wherein the free ends (36) of the spring tongues (30) reach through openings (40) in the brush holder plate (18) in the preassembly position.

8. Brush holder plate (18) according to Claim 7, characterised in that the spring tongues (30) run up against the region (50) surrounding the respective opening (40) and free the respective brush (22) when the cartridges (20) are displaced radially inwards.

9. Brush holder plate (18) according to any one of the preceding Claims, characterised in that the cartridges (20) are formed such that they can be fixed to the brush holder plate (18), in particular locked or clamped to the brush holder plate (18), in the final assembly position.

10. Electric motor (10) with a casing, with an armature shaft (12), with a commutator (14) disposed on the armature shaft (12) and with a brush holder plate (18) according to any one of the preceding Claims, wherein the contact faces (34) of the brushes (22) act against the commutator (14) under spring loading in the final assembly position.

11. Electric motor (10) according to Claim 10, characterised in that the armature shaft (12) is supported against the casing or an end shield via a bearing element (16) of the diameter a, wherein the diameter b of the aperture (24) is greater than the diameter a of the bearing element (16).

12. Method for assembling an electric motor (10) according to either of Claims 10 and 11, characterised in that the armature shaft (12) is preassembled with the bearing element (16), that the brush holder plate (18) is inserted in the casing, wherein the cartridges (20) are

in the preassembly position, that the bearing element (16) is guided through the aperture (24), and that the cartridges (20) are displaced radially inwards into the final assembly position.

13. Method according to Claim 12, characterised in that the brushes (22) are held in the radially outer position in the cartridges (20) by the holding means (30) during assembly and are freed upon displacing the cartridges (20) into the final assembly position.